Utah Valley University | Department of Architecture and Engineering Design

PROJECT 01
Beit Lehi Visitor Center

ARC 3110 | Fall Semester 2021

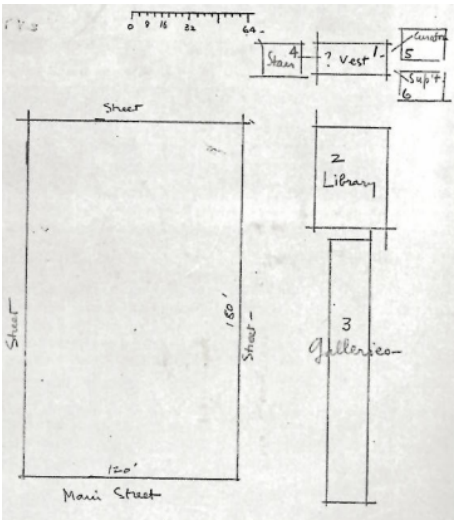
PHASE 2 – SCHEMATIC DESIGN

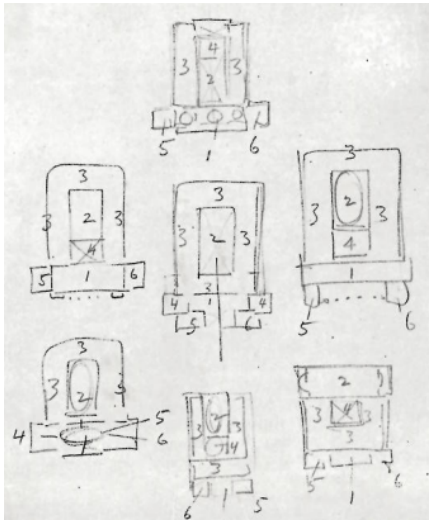
SCHEMATIC DESIGN

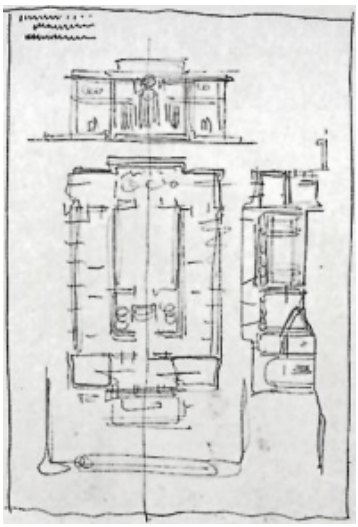
With the knowledge gained from the Pre-Design phase, students will begin the formal architectural design process where ideas and concepts emerge about the project's program, client requirements, and user needs. We call this phase schematic design. As outlined in the course schedule, schematic design includes the following activities:

- Esquisse - Concept Development
- Review Exterior Design Concepts
- Review Program Layout Strategies
- Start Studies at Larger Scale
- Develop Plan, Section, Elevation

- Refine Plan, Section, Elevation
- Start Diagrams, Perspectives
- Preparation for Interim Review
- Hand in Project / Pin Up Materials for Review
- Interim Design Review
- Project SD Phase Reflections
- Digital Portfolio Submission







ESQUISSE / CONCEPT DEVELOPMENT

Embedded in the *Ecole des Beaux-Arts* curriculum was the *esquisse* – a French word for sketch. The esquisse is a preliminary sketch showing the main ideas of your solution to the design challenge and problem explained above. It is done in a short and fixed time, usually anywhere from a couple hours to nine hours. Your final design for the project will be founded on your esquisse.

As part of this design process, each student will create a total of **six (6)** quick sketch proposals for the design of the main façade and **six (6)** quick sketch proposals for the floor plan layout of the program. The design will be informed based on your findings from your program, precedent, and site analyses.

After the esquisse exercise, students will select one of their concepts for the façade and floor plan to further refine.

SD INTERIM REVIEW DELIVERABLES

For the Schematic Design Interim Design Review, each student will work on developing their projects by producing the following drawings. These will be assembled on several 24”x36” drawing sheets.

- Site plan showing roof plan and context around site, such as roads, bus/vehicle parking, bus loading/unloading, tour loading/unloading, trees, green space, sidewalks (1”=20’)
- Main Building Elevation (1/8”=1’-0”)
- Floor plan with spaces labeled (1/8”=1’-0”)
- Longitudinal and cross sections of building showing context (1/8”=1’-0”)
- Diagrams showing arrival sequence and circulation

- Perspective showing exterior and interior user experience

Each drawing should include the following:
- North arrow (when appropriate)
- Graphic scale
- Drawing type label (Ground floor plan, East elevation, section)

RELATED READING

- Adam, Robert. *Classical Architecture: A Comprehensive Handbook to the Tradition of Classical Style*. New York: Harry N. Abrams, 1991.
- Ching, Frank. *Architecture: Form, Space, & Order*. 3rd ed. Hoboken, NJ: John Wiley & Sons, 2007.*
- Alberti, Leon Battista. *The Ten Books of Architecture: The 1755 Leoni Edition*. New York: Dover, 1986.*
- Chitham, Robert. *The Classical Orders of Architecture*. 2nd ed. Burlington, MA: Architectural Press, 2005.
- Clark, Roger H., and Michael Pause. *Precedents in Architecture: Analytic Diagrams, Formative Ideas, and Partis*. 3rd ed. Hoboken, NJ: John Wiley & Sons, 2005.
- Curtis, Nathaniel Cortlandt. *The Secrets of Architectural Composition*. Mineola, NY: Dover, 2011.
- Cusato, Marianne, and Ben Pentreath. *Get Your House Right: Architectural Elements to Use & Avoid*. New York: Sterling, 2011.
- Gabriel, Jean-François. *Classical Architecture for the Twenty-First Century: An Introduction to Design*. New York: W.W. Norton & Company, 2004.
- Glazier, Richard. *A Manual of Historic Ornament: Treating Upon the Evolution, Tradition, and Development of Architecture & the Applied Arts.* New York: Chas. Scribners Sons, 1914. PDF available at: https://www.google.com/books/edition/A_manual_of_historic_ornament_treating_u/CQBZAAAAYAAJ?hl=en&gbpv=0
- Gromort, Georges. *The Elements of Classical Architecture*. 1st ed, The Classical America Series in Art and Architecture. New York: W.W. Norton, 2001.
- Harbeson, John F. *The Study of Architectural Design: With Special Reference to the Program of the Beaux-Arts Institute of Design*. New York: W.W. Norton, 2008.
- Hersey, George L. *The Lost Meaning of Classical Architecture: Speculations on Ornament from Vitruvius to Venturi*. Cambridge, Mass.: MIT Press, 1988.
- Jones, Owen. *The Grammar of Ornament*. London: Bernard Quaritch, 1868. PDF available at: https://www.google.com/books/edition/The_Grammar_of_Ornament/6xI8AQAAMAAJ?hl=en&gbpv=0
- Martineau, John, ed. *Quadrivium: The Four Classical Liberal Arts of Number, Geometry, Music, & Cosmology*. New York: Bloomsbury USA, 2010.
- Mouzon, Stephen A., and Susan M. Henderson. *Traditional Construction Patterns: Design and Detail Rules of Thumb*. New York: McGraw-Hill, 2004.

- Palladio, Andrea. *The Four Books of Architecture*. New York: Dover, 1965.*
- Schneider, Michael S. *A Beginner's Guide to Constructing the Universe: The Mathematical Archetypes of Nature, Art, and Science*. New York: HarperCollins, 1994.*
- Semes, Steven W. *The Architecture of the Classical Interior*. New York: W.W. Norton, 2004.
- Semes, Steven W. *The Future of the Past: A Conservation Ethic for Architecture, Urbanism, and Historic Preservation*. New York: W.W. Norton & Company, 2009.
- Stratton, Arthur. *Form and Design in Classic Architecture*. Mineola, NY: Dover, 2012.
- Summerson, John. *The Classical Language of Architecture*. Cambridge, MA: MIT Press, 1963.
- van Pelt, Robert Jan, and Carroll William Westfall. *Architectural Principles in the Age of Historicism*. New Haven: Yale University Press, 1991.
- Vitruvius Pollio, Marcus. *Vitruvius: The Ten Books on Architecture*. Translated by Morris H. Morgan. New York: Dover, 1960.*
- Ware, William R. *The American Vignola: A Guide to the Making of Classical Architecture*. New York: Dover, 1994. Older edition PDFs available online: (Book 1) https://archive.org/details/cu31924091026504/page/n1 (Book 2) https://archive.org/details/americanvignola00vigngoog/page/n5
- Wittkower, Rudolf. *Architectural Principles in the Age of Humanism*. London: Academy Editions, 1998.
- Students may also want to reference other free digital e-books about architectural design at the following links:
  - https://www.classicist.org/resources/digital-rare-books-archive/
  - http://onlinebooks.library.upenn.edu/webbin/book/browse?type=lcsubc&key=Architecture&c=x

SD PHASE ASSESSMENT

Your design project will be graded based on the following criteria:

LEARNING OBJECTIVE	POINTS
DESIGN SOLUTION: Successful design solution to fundamental architectural problems that integrates concepts, formal/visual principles, creative inquiry, and techniques that address the functional and programmatic requirements of the project.	30 (20%)
FORMAL & SPATIAL PRINCIPLES: Demonstrates fundamental understanding and application of formal, spatial, and aesthetic principles. (e.g., proportion, classical orders, geometry, user experience, human scale, beauty, hierarchy)	30 (20%)
SITE DESIGN: Project addresses the immediate site, neighborhood, and urban design needs of the area. Design proposal appropriately responds to issues emerging from the historic district, immediate context, socio-cultural demographic, and institutional presence.	15 (10%)

VISUAL/GRAPHIC COMMUNICATION: Communicates design solutions effectively using architectural presentation materials and techniques (e.g., line weights, level of detail for scale, level of craft, organized graphic presentation). This also includes analog models and their ability to adequately convey the main project characteristics.	15 (10%)
USE OF PRECEDENTS: Project clearly makes informed and well-reasoned choices regarding the incorporation of design principles from precedent analysis.	15 (10%)
DESIGN PROCESS: Project demonstrates a rigorous and successful design process. This will be evident in the refinement of the selected concept sketch (*esquisse*) to the final design solution (e.g., development of plans, sections, elevations, models, diagrams, perspectives, etc.)	15 (10%)
VERBAL COMMUNICATION: Verbal communication is well planned and executed. Presentation results in further discussion of the design solution.	15 (10%)
PROJECT REQUIREMENTS: All project requirements and criteria are met, such as deadlines, deliverables, format, portfolio, etc.	15 (10%)
TOTAL	**150 points / 100%**